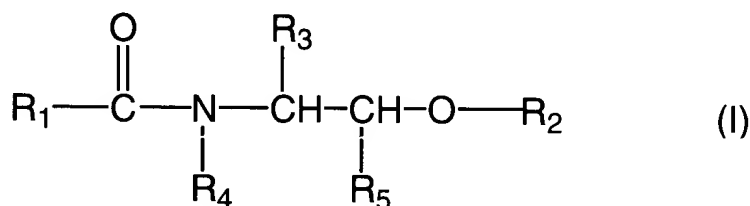


CLAIMS

19. A liquid cosmetic composition, comprising, in a cosmetically acceptable aqueous medium, at least one liquid fatty alcohol, at least one ceramide compound and at least one cationic surfactant.

20. The composition according to claim 19, wherein said at least one ceramide compound is of formula (I):



wherein:

- R₁ is chosen from:

- a saturated or unsaturated, linear or branched, C₁-C₅₀ hydrocarbon group, wherein said C₁-C₅₀ hydrocarbon group is optionally substituted with at least one hydroxyl group, wherein said hydroxyl group is optionally esterified by an acid R₇COOH, R₇ being chosen from a linear or branched, saturated or unsaturated, C₁-C₃₅ hydrocarbon group, wherein said C₁-C₃₅ hydrocarbon group of R₇ is optionally substituted with at least one hydroxyl group that is optionally esterified by a linear or branched, saturated or unsaturated, C₁-C₃₅ fatty acid, wherein said C₁-C₃₅ fatty acid is optionally substituted with at least one hydroxyl group;

- a group R''-(NR-CO)-R', wherein R is chosen from hydrogen and a C₁-C₂₀ hydrocarbon group substituted with at least one hydroxyl group, and wherein R' and R'' are chosen from hydrocarbon groups, wherein the sum of the carbon atoms in R' and R'' ranges from 9 to 30, and wherein R' is a divalent radical; and

- a group R₈-O-CO-(CH₂)_p, wherein R₈ is a C₁-C₂₀ hydrocarbon group, and p is an integer ranging from 1 to 12;

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- R_2 is chosen from hydrogen, a saccharide group, a sulfate residue, a phosphate residue, a phosphorylethylamine group and a phosphorylethylammonium group;
- R_3 is chosen from hydrogen and a saturated or unsaturated, linear or branched, C_2 - C_{33} hydrocarbon group, wherein said C_1 - C_{33} hydrocarbon group is optionally substituted with at least one hydroxyl group, wherein said hydroxyl group is

- optionally esterified by an acid chosen from an inorganic acid and an acid R_7COOH , wherein R_7 has the same meaning as above, or

- optionally etherified by a group chosen from a (glycosyl) $_n$ group, a (galactosyl) $_m$ group, a sulfogalactosyl group, a phosphorylethylamine group and a phosphorylethylammonium group, wherein n is an integer ranging from 1 to 4 and m is an integer ranging from 1 to 8 ,

and wherein R_3 is optionally substituted with at least one C_1 - C_{14} alkyl group;

- R_4 is chosen from hydrogen, a methyl group, an ethyl group, an optionally hydroxylated, linear or branched, saturated or unsaturated, C_3 - C_{50} hydrocarbon group, a group $-CH_2-CHOH-CH_2-O-R_6$, wherein R_6 is chosen from a C_{10} - C_{26} hydrocarbon group and a group $R_8-O-CO-(CH_2)_p$, wherein R_8 is a C_1 - C_{20} hydrocarbon group, and p is an integer ranging from 1 to 12;

- R_5 is chosen from hydrogen and a saturated or unsaturated, linear or branched, C_1 - C_{33} hydrocarbon group optionally substituted with at least one hydroxyl group, wherein said hydroxyl group is optionally etherified by a group chosen from a (glycosyl) $_n$ group, a (galactosyl) $_m$ group, a sulfogalactosyl group, a phosphorylethylamine group, and a phosphorylethylammonium group, wherein m and n have the same meanings as above; and

with the proviso that when R_3 and R_5 are each hydrogen or when R_3 is hydrogen and R_5 is a methyl group, then R_4 is not chosen from hydrogen, a methyl group, and an ethyl group.

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21. The composition according to claim 20, wherein R_1 is a saturated or unsaturated, linear or branched, C_5 - C_{50} hydrocarbon group.

22. The composition according to claim 20, wherein R in group $R''-(NR-CO)-R'$ is a monohydroxylated C_1 - C_{20} hydrocarbon group.

23. The composition according to claim 20, wherein R_2 is a saccharide group chosen from a (glycosyl) $_n$ group, a (galactosyl) $_m$ group and a sulfogalactosyl group, wherein n is an integer ranging from 1 to 4 and m is an integer ranging from 1 to 8.

24. The composition according to claim 20, wherein R_3 is a C_{15} - C_{26} α -hydroxyalkyl group, wherein the α -hydroxyl group of said α -hydroxyalkyl is optionally esterified by a C_{16} - C_{30} α -hydroxy acid.

25. The composition according to claim 19, wherein said at least one ceramide compound is chosen from:

- 2-(N-linoleoylamino)-1,3-octadecanediol,
- 2-(N-oleoylamino)-1,3-octadecanediol,
- 2-(N-palmitoylamino)-1,3-octadecanediol,
- 2-(N-stearoylamino)-1,3-octadecanediol,
- 2-(N-behenoylamino)-1,3-octadecanediol,
- 2-[N-(2-hydroxypalmitoyl)amino]-1,3-octadecanediol,
- 2-(N-stearoylamino)-1,3,4-octadecanetriol, and
- 2-(N-palmitoylamino)-1,3-hexadecanediol.

26. The composition according to claim 19, wherein said at least one ceramide compound is chosen from bis(N-hydroxyethyl-N-cetyl)malonamide,

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N-(2-hydroxyethyl)-N-(3-cetyloxy-2-hydroxypropyl)amide of cetylic acid and N-docosanoyl-N-methyl-D-glucamine.

27. The composition according to claim 19, wherein said at least one ceramide compound is present in a concentration ranging from 0.0001% to 20% by weight, relative to the total weight of the composition.

28. The composition according to claim 27, wherein said at least one ceramide compound is present in a concentration ranging from 0.001% to 10% by weight, relative to the total weight of the composition.

29. The composition according to claim 28, wherein said at least one ceramide compound is present in a concentration ranging from 0.005% to 3% by weight, relative to the total weight of the composition.

30. The composition according to claim 19, wherein said at least one liquid fatty alcohol is chosen from lauryl alcohol, myristyl alcohol, isomyristyl alcohol, isostearyl alcohol, isocetyl alcohol, isoarachidyl alcohol, 2-octyldodecanol, 2-butyloctanol and oleyl alcohol.

31. The composition according to claim 30, wherein said at least one fatty alcohol is chosen from isostearyl alcohol and isocetyl alcohol.

32. The composition according to claim 19, wherein said at least one liquid fatty alcohol is present in a concentration ranging from 0.5% to 10% by weight, relative to the approximate total weight of the composition.

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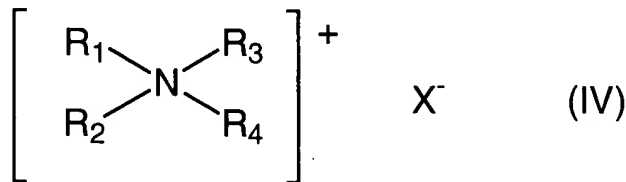
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33. The composition according to claim 32, wherein said at least one liquid fatty alcohol is present in a concentration ranging from 1% to 10% by weight, relative to the approximate total weight of the composition.

34. The composition according to claim 33, wherein said at least one liquid fatty alcohol is present in a concentration ranging from 1.5% to 3% by weight, relative to the total weight of the composition.

35. The composition according to claim 19, wherein said at least one cationic surfactant is chosen from:

A) quaternary ammonium salts of formula (IV):



wherein X^- of formula (IV) is an anion chosen from halide anions, (C_2-C_6) alkyl sulfate anions, phosphate anions, alkyl sulfonate anions, alkylaryl sulfonate anions, and anions derived from an organic acid, and

(i) R_1 , R_2 , and R_3 , of formula (IV), which may be identical or different, are chosen from aromatic groups and from linear and branched aliphatic groups comprising from 1 to 4 carbon atoms, wherein said aliphatic groups optionally comprise at least one heteroatom, and then

R_4 of formula (IV) is chosen from linear and branched alkyl groups comprising from 20 to 30 carbon atoms; or alternatively

(ii) R_1 and R_2 , of formula (IV), which may be identical or different, are chosen from aromatic groups and from linear and branched aliphatic groups comprising from 1

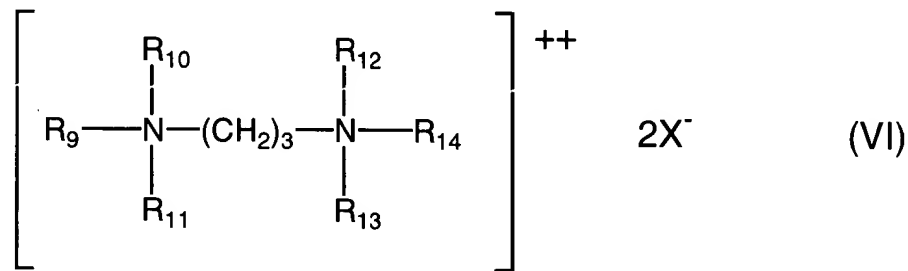
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to 4 carbon atoms, wherein said aliphatic groups optionally comprise at least one heteroatom, and then

R_3 and R_4 , of formula (IV), which may be identical or different, are chosen from linear and branched alkyl groups comprising from 12 to 30 carbon atoms, wherein said alkyl groups comprise at least one group chosen from ester groups and amide groups;

- B) - quaternary ammonium salts of imidazolinium;
C) - quaternary diammonium salts of formula (VI):



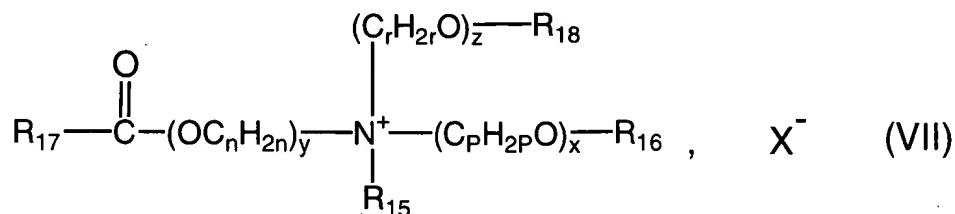
wherein

R_9 is chosen from aliphatic groups comprising from about 16 to 30 carbon atoms, R_{10} , R_{11} , R_{12} , R_{13} and R_{14} , which may be identical or different, are chosen from hydrogen and alkyl groups comprising from 1 to 4 carbon atoms, and

X^- of formula (VI) is an anion chosen from halide anions, acetate anions, phosphate anions, nitrate anions and methyl sulfate anions;

and

- D) - quaternary ammonium salts, comprising at least one ester functional group, of formula (VII),:



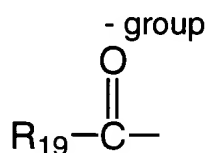
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wherein

- R₁₅ is chosen from C₁-C₆ alkyl groups, C₁-C₆ hydroxyalkyl groups, and dihydroxyalkyl groups;

- R₁₆ is chosen from:

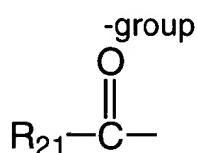


- linear and branched, saturated and unsaturated, C₁-C₂₂ hydrocarbon groups

R₂₀, and

- hydrogen,

- R₁₈ is chosen from:



- linear and branched, saturated and unsaturated, C₁-C₆ hydrocarbon groups R₂₂, and

- hydrogen,

- R₁₇, R₁₉ and R₂₁, which are identical or different, are each chosen from linear and branched, saturated and unsaturated, C₇-C₂₁ hydrocarbon groups;

- n, p and r, of formula (VII), which are identical or different, are each integers having values ranging from 2 to 6;

- y of formula (VII) is an integer having a value ranging from 1 to 10;

- x and z, of formula (VII), which are identical or different, are each integers having values ranging from 0 to 10;

- X⁻ of formula (VII) is an anion chosen from organic anions and inorganic anions, and chosen from simple anions and complex anions;

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with the provisos that the sum $x + y + z$, of formula (VII), has a value ranging from 1 to 15, that when x of formula (VII) has a value of 0, then R_{16} denotes R_{20} , and that when z of formula (VII) has a value of 0, then R_{18} denotes R_{22} .

36. The composition according to claim 35, wherein said at least one cationic surfactant is chosen from a quaternary ammonium salt of formula (IV) wherein X^- of formula (IV) is an anionic halide chosen from chloride, bromide and iodide.

37. The composition according to claim 35, wherein said at least one cationic surfactant is chosen from a quaternary ammonium salt of formula (IV) wherein X^- of formula (IV) is methyl sulfate.

Al 38. The composition according to claim 35, wherein said at least one cationic surfactant is chosen from quaternary ammonium salts of formula (IV) wherein X^- of formula (IV) is an anion derived from an organic acid chosen from acetate and lactate.

39. The composition according to claim 35, wherein said at least one cationic surfactant is chosen from quaternary ammonium salts of formula (IV) wherein in (i), R_1 , R_2 and R_3 , of formula (IV), which may be identical or different, are chosen from aryl groups and alkylaryl groups.

40. The composition according to claim 35, wherein said at least one cationic surfactant is chosen from quaternary ammonium salts of formula (IV) wherein in (i), R_1 , R_2 and R_3 , of formula (IV), which may be identical or different, are chosen from aliphatic groups comprising at least one heteroatom chosen from oxygen, nitrogen, sulfur, and halogens.

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41. The composition according to claim 35, wherein said at least one cationic surfactant is chosen from quaternary ammonium salts of formula (IV) wherein in (ii), R_1 and R_2 , of formula (IV), which may be identical or different, are chosen from aryl groups and alkylaryl groups.

42. The composition according to claim 35, wherein said at least one cationic surfactant is chosen from quaternary ammonium salts of formula (IV) wherein in (ii), R_1 and R_2 , of formula (IV), which may be identical or different, are chosen from aliphatic groups comprising at least one heteroatom chosen from oxygen, nitrogen, sulfur and halogens.

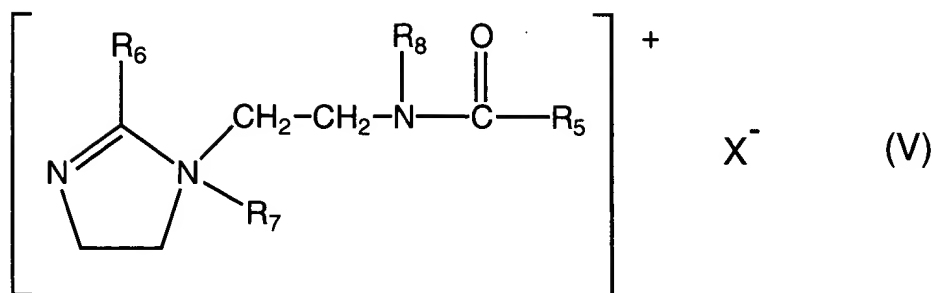
Al 43. The composition according to claim 35, wherein said at least one cationic surfactant is chosen from quaternary ammonium salts of formula (IV) wherein in (ii), R_1 and R_2 , of formula (IV), which may be identical or different, are chosen from aliphatic groups comprising from 1 to 4 carbon atoms and chosen from alkyl groups, alkoxy groups, alkylamide groups and hydroxyalkyl groups.

44. The composition according to claim 35, wherein said at least one cationic surfactant is chosen from quaternary ammonium salts of formula (IV) wherein in (ii), at least one of R_3 and R_4 , of formula (IV), which may be identical or different, is chosen from $(C_{12}-C_{22})$ alkylamido (C_2-C_6) alkyl groups and $(C_{12}-C_{22})$ alkyl acetate groups.

45. The composition according to claim 35, wherein said at least one cationic surfactant is a quaternary ammonium salt of imidazolinium of formula (V):

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wherein R₅ of formula (V) is chosen from alkenyl groups comprising from 8 to 30 carbon atoms and alkyl groups comprising from 8 to 30 carbon atoms, R₆ of formula (V) is chosen from hydrogen, C₁-C₄ alkyl groups, alkenyl groups comprising from 8 to 30 carbon atoms, and alkyl groups comprising from 8 to 30 carbon atoms, R₇ of formula (V) is chosen from C₁-C₄ alkyl groups, R₈ of formula (V) is chosen from hydrogen and C₁-C₄ alkyl groups, and X⁻ of formula (V) is an anion chosen from halide anions, phosphate anions, acetate anions, lactate anions, alkyl sulfate anions, alkyl sulfonate anions and alkylaryl sulfonate anions.

46. The composition according to claim 45, wherein in said formula (V), R₅ of formula (V) is chosen from alkenyl groups comprising from 8 to 30 carbon atoms and alkyl groups comprising from 8 to 30 carbon atoms, wherein said alkenyl groups and alkyl groups are derived from tallow fatty acids.

47. The composition according to claim 45, wherein said at least one cationic surfactant is the quaternary diammonium salt propanetallowdiammonium dichloride.

48. The composition according to claim 19, wherein said at least one cationic surfactant is chosen from behenyltrimethylammonium salts, stearamidopropyl dimethyl (myristyl acetate) ammonium salts, Quaternium-27 and Quaternium-83.

49. The composition according to claim 19, wherein said at least one cationic surfactant is present at a concentration ranging from 0.2% to 10% by weight, relative to the total weight of the composition.

50. The composition according to claim 49, wherein said at least one cationic surfactant is present at a concentration ranging from 0.5% to 5% by weight, relative to the total weight of the composition.

51. The composition according to claim 50, wherein said at least one cationic surfactant is present at a concentration ranging from 1% to 3.5% by weight, relative to the total weight of the composition.

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52. The composition according to claim 19, wherein said cosmetically acceptable aqueous medium is chosen from water and a mixture of water and at least one cosmetically acceptable solvent.

53. The composition according to claim 52, wherein said cosmetically acceptable solvents are chosen from monoalcohols, polyalcohols, and glycol ethers.

Sub
R2
54. The composition according to claim 19, further comprising at least one additive chosen from thickeners, perfumes, pearlescent agents, surfactants, preservatives, sunscreens, silicones, anionic polymers, nonionic polymers, cationic polymers, amphoteric polymers, proteins, protein hydrolysates, fatty acids, fatty alcohols, hydroxy acids, vitamins, provitamins, panthenol, vegetable oils, animal oils, mineral oils, and synthetic oils.

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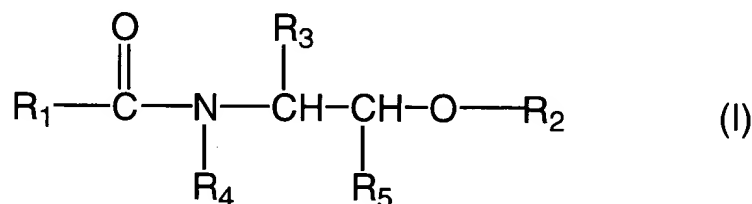
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55. The composition according to claim 54, wherein said at least one additive is a C₁₆-C₄₀ fatty acid chosen from 18-methyleicosanoic acid, hydroxy acids, vitamins, panthenol and fatty esters.

56. The composition according to claim 19, wherein said composition is in the form of a composition chosen from: a shampoo; a leave-in conditioner; a rinse-out conditioner; compositions for at least one of permanent waving hair, straightening hair, dyeing hair and bleaching hair; a rinse-out composition to be applied before or after shampooing hair, dyeing hair, bleaching hair, permanent waving hair or hair straightening; or between two stages of permanent waving hair or hair straightening; and a leave-in composition for holding a hair style, for hair shaping or for hair styling.

57. A method of making a composition to be applied to the hair, comprising combining, in a cosmetically acceptable aqueous medium, at least one liquid fatty alcohol, at least one ceramide compound and at least one cationic surfactant.

58. The method according to claim 57, wherein said at least one ceramide compound is of formula (I):



wherein:

- R₁ is chosen from:

- a saturated or unsaturated, linear or branched, C₁-C₅₀ hydrocarbon group, wherein said C₁-C₅₀ hydrocarbon group is optionally substituted with at least one hydroxyl group, wherein said hydroxyl group is optionally esterified by an acid R₇COOH,

R_7 being chosen from a linear or branched, saturated or unsaturated, C_1-C_{35} hydrocarbon group, wherein said C_1-C_{35} hydrocarbon group of R_7 is optionally substituted with at least one hydroxyl group that is optionally esterified by a linear or branched, saturated or unsaturated, C_1-C_{35} fatty acid, wherein said C_1-C_{35} fatty acid is optionally substituted with at least one hydroxyl group;

- a group $R''-(NR-CO)-R'$, wherein R is chosen from hydrogen and a C_1-C_{20} hydrocarbon group substituted with at least one hydroxyl group, and wherein R' and R'' are chosen from hydrocarbon groups, wherein the sum of the carbon atoms in R' and R'' ranges from 9 to 30, and wherein R' is a divalent radical; and

- a group $R_8-O-CO-(CH_2)_p$, wherein R_8 is a C_1-C_{20} hydrocarbon group, and p is an integer ranging from 1 to 12;

- R_2 is chosen from hydrogen, a saccharide group, a sulfate residue, a phosphate residue, a phosphorylethylamine group and a phosphorylethylammonium group;

- R_3 is chosen from hydrogen and a saturated or unsaturated, linear or branched, C_2-C_{33} hydrocarbon group, wherein said C_1-C_{33} hydrocarbon group is optionally substituted with at least one hydroxyl group, wherein said hydroxyl group is

- optionally esterified by an acid chosen from an inorganic acid and an acid R_7COOH , wherein R_7 has the same meaning as above, or

- optionally etherified by a group chosen from a (glycosyl) $_n$ group, a (galactosyl) $_m$ group, a sulfogalactosyl group, a phosphorylethylamine group and a phosphorylethylammonium group, wherein n is an integer ranging from 1 to 4 and m is an integer ranging from 1 to 8 ,

and wherein R_3 is optionally substituted with at least one C_1-C_{14} alkyl group;

- R_4 is chosen from hydrogen, a methyl group, an ethyl group, an optionally hydroxylated, linear or branched, saturated or unsaturated, C_3-C_{50} hydrocarbon group, a group $-CH_2-CHOH-CH_2-O-R_6$, wherein R_6 is chosen from a $C_{10}-C_{26}$ hydrocarbon group

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and a group $R_8-O-CO-(CH_2)_p$, wherein R_8 is a C_1-C_{20} hydrocarbon group, and p is an integer ranging from 1 to 12;

- R_5 is chosen from hydrogen and a saturated or unsaturated, linear or branched, C_1-C_{33} hydrocarbon group optionally substituted with at least one hydroxyl group, wherein said hydroxyl group is optionally etherified by a group chosen from a (glycosyl) $_n$ group, a (galactosyl) $_m$ group, a sulfogalactosyl group, a phosphorylethylamine group, and a phosphorylethylammonium group, wherein m and n have the same meanings as above; and

with the proviso that when R_3 and R_5 are each hydrogen or when R_3 is hydrogen and R_5 is a methyl group, then R_4 is not chosen from hydrogen, a methyl group, and an ethyl group.

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59. The method according to claim 57, wherein said at least one ceramide compound is chosen from:

- 2-(N-linoleoylamino)-1,3-octadecanediol,
- 2-(N-oleoylamino)-1,3-octadecanediol,
- 2-(N-palmitoylamino)-1,3-octadecanediol,
- 2-(N-stearoylamino)-1,3-octadecanediol,
- 2-(N-behenoylamino)-1,3-octadecanediol,
- 2-[N-(2-hydroxypalmitoyl)amino]-1,3-octadecanediol,
- 2-(N-stearoylamino)-1,3,4-octadecanetriol, and
- 2-(N-palmitoylamino)-1,3-hexadecanediol.

60. The method according to claim 57, wherein said at least one ceramide compound is chosen from bis(N-hydroxyethyl-N-cetyl)malonamide, N-(2-hydroxyethyl)-N-(3-cetyloxy-2-hydroxypropyl)amide of cetylic acid and N-docosanoyl-N-methyl-D-glucamine.

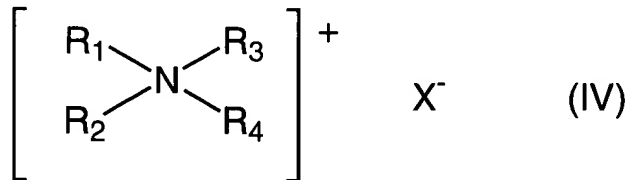
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61. The method according to claim 57, wherein said at least one liquid fatty alcohol is chosen from lauryl alcohol, myristyl alcohol, isomyristyl alcohol, isostearyl alcohol, isocetyl alcohol, isoarachidyl alcohol, 2-octyldodecanol, 2-butyloctanol and oleyl alcohol.

62. The method according to claim 57, wherein said at least one cationic surfactant is chosen from:

A) quaternary ammonium salts of formula (IV):



wherein X^- of formula (IV) is an anion chosen from halide anions, (C_2-C_6) alkyl sulfate anions, phosphate anions, alkyl sulfonate anions, alkylaryl sulfonate anions, and anions derived from an organic acid, and

(i) R_1 , R_2 , and R_3 , of formula (IV), which may be identical or different, are chosen from aromatic groups and from linear and branched aliphatic groups comprising from 1 to 4 carbon atoms, wherein said aliphatic groups optionally comprise at least one heteroatom, and then

R_4 of formula (IV) is chosen from linear and branched alkyl groups comprising from 20 to 30 carbon atoms; or alternatively

(ii) R_1 and R_2 , of formula (IV), which may be identical or different, are chosen from aromatic groups and from linear and branched aliphatic groups comprising from 1 to 4 carbon atoms, wherein said aliphatic groups optionally comprise at least one heteroatom, and then

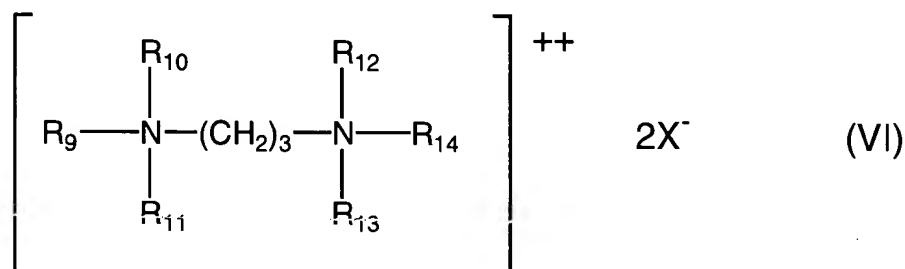
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R₃ and R₄, of formula (IV), which may be identical or different, are chosen from linear and branched alkyl groups comprising from 12 to 30 carbon atoms, wherein said alkyl groups comprise at least one group chosen from ester groups and amide groups;

B) - quaternary ammonium salts of imidazolinium;

C) - quaternary diammonium salts of formula (VI):



wherein

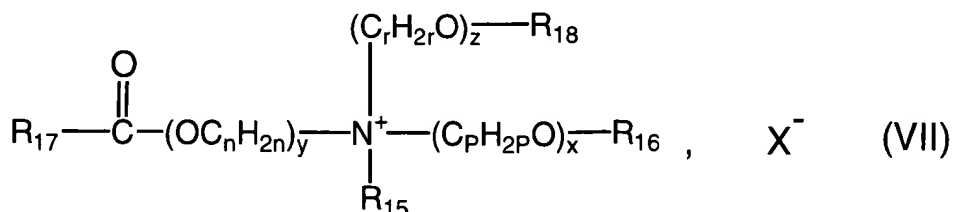
R₉ is chosen from aliphatic groups comprising from about 16 to 30 carbon atoms,

R₁₀, R₁₁, R₁₂, R₁₃ and R₁₄, which may be identical or different, are chosen from hydrogen and alkyl groups comprising from 1 to 4 carbon atoms, and

X⁻ of formula (VI) is an anion chosen from halide anions, acetate anions, phosphate anions, nitrate anions and methyl sulfate anions;

and

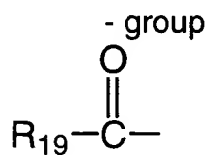
D) - quaternary ammonium salts, comprising at least one ester functional group, of formula (VII),:



wherein

- R₁₅ is chosen from C₁-C₆ alkyl groups, C₁-C₆ hydroxyalkyl groups, and dihydroxyalkyl groups;

- R₁₆ is chosen from:

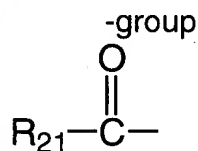


- linear and branched, saturated and unsaturated, C₁-C₂₂ hydrocarbon groups

R₂₀, and

- hydrogen,

- R₁₈ is chosen from:



- linear and branched, saturated and unsaturated, C₁-C₆ hydrocarbon groups R₂₂, and

- hydrogen,

- R₁₇, R₁₉ and R₂₁, which are identical or different, are each chosen from linear and branched, saturated and unsaturated, C₇-C₂₁ hydrocarbon groups;

- n, p and r, of formula (VII), which are identical or different, are each integers having values ranging from 2 to 6;

- y of formula (VII) is an integer having a value ranging from 1 to 10;

- x and z, of formula (VII), which are identical or different, are each integers having values ranging from 0 to 10;

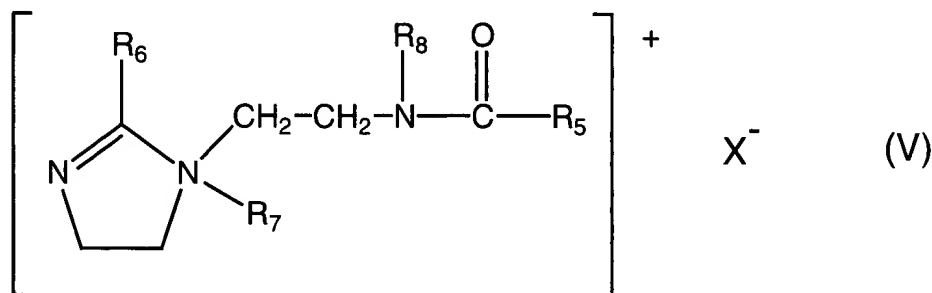
- X⁻ of formula (VII) is an anion chosen from organic anions and inorganic anions, and chosen from simple anions and complex anions;

with the provisos that the sum x + y + z, of formula (VII), has a value ranging from 1 to 15, that when x of formula (VII) has a value of 0, then R₁₆ denotes R₂₀, and that when z of formula (VII) has a value of 0, then R₁₈ denotes R₂₂.

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63. The method according to claim 62, wherein said at least one cationic surfactant is a quaternary ammonium salt of imidazolinium of formula (V):

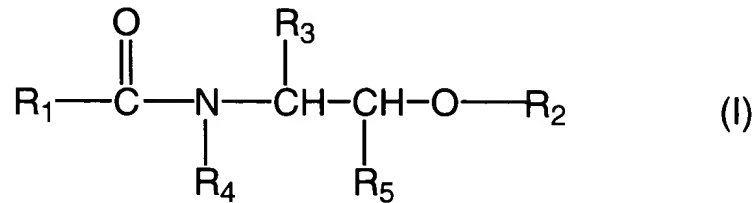


wherein R₅ of formula (V) is chosen from alkenyl groups comprising from 8 to 30 carbon atoms and alkyl groups comprising from 8 to 30 carbon atoms, R₆ of formula (V) is chosen from hydrogen, C₁-C₄ alkyl groups, alkenyl groups comprising from 8 to 30 carbon atoms, and alkyl groups comprising from 8 to 30 carbon atoms, R₇ of formula (V) is chosen from C₁-C₄ alkyl groups, R₈ of formula (V) is chosen from hydrogen and C₁-C₄ alkyl groups, and X⁻ of formula (V) is an anion chosen from halide anions, phosphate anions, acetate anions, lactate anions, alkyl sulfate anions, alkyl sulfonate anions and alkylaryl sulfonate anions.

64. A method for treating keratinous materials, comprising applying at least one composition to said keratinous materials, and then optionally rinsing with water, wherein said at least one composition comprises, in a cosmetically acceptable aqueous medium, at least one liquid fatty alcohol, at least one ceramide compound and at least one cationic surfactant.

65. The method according to claim 64, wherein said keratinous materials are chosen from hair.

66. The method according to claim 64, wherein said at least one ceramide compound is of formula (I):



wherein:

- R₁ is chosen from:

- a saturated or unsaturated, linear or branched, C₁-C₅₀ hydrocarbon group, wherein said C₁-C₅₀ hydrocarbon group is optionally substituted with at least one hydroxyl group, wherein said hydroxyl group is optionally esterified by an acid R₇COOH, R₇ being chosen from a linear or branched, saturated or unsaturated, C₁-C₃₅ hydrocarbon group, wherein said C₁-C₃₅ hydrocarbon group of R₇ is optionally substituted with at least one hydroxyl group that is optionally esterified by a linear or branched, saturated or unsaturated, C₁-C₃₅ fatty acid, wherein said C₁-C₃₅ fatty acid is optionally substituted with at least one hydroxyl group;

- a group R''-(NR-CO)-R', wherein R is chosen from hydrogen and a C₁-C₂₀ hydrocarbon group substituted with at least one hydroxyl group, and wherein R' and R'' are chosen from hydrocarbon groups, wherein the sum of the carbon atoms in R' and R'' ranges from 9 to 30, and wherein R' is a divalent radical; and

- a group R₈-O-CO-(CH₂)_p, wherein R₈ is a C₁-C₂₀ hydrocarbon group, and p is an integer ranging from 1 to 12;

- R₂ is chosen from hydrogen, a saccharide group, a sulfate residue, a phosphate residue, a phosphorylethylamine group and a phosphorylethylammonium group;

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- R₃ is chosen from hydrogen and a saturated or unsaturated, linear or branched, C₂-C₃₃ hydrocarbon group, wherein said C₁-C₃₃ hydrocarbon group is optionally substituted with at least one hydroxyl group, wherein said hydroxyl group is

- optionally esterified by an acid chosen from an inorganic acid and an acid R₇COOH, wherein R₇ has the same meaning as above, or

- optionally etherified by a group chosen from a (glycosyl)_n group, a (galactosyl)_m group, a sulfogalactosyl group, a phosphorylethylamine group and a phosphorylethylammonium group, wherein n is an integer ranging from 1 to 4 and m is an integer ranging from 1 to 8 ,

and wherein R₃ is optionally substituted with at least one C₁-C₁₄ alkyl group;

- R₄ is chosen from hydrogen, a methyl group, an ethyl group, an optionally hydroxylated, linear or branched, saturated or unsaturated, C₃-C₅₀ hydrocarbon group, a group -CH₂-CHOH-CH₂-O-R₆, wherein R₆ is chosen from a C₁₀-C₂₆ hydrocarbon group and a group R₈-O-CO-(CH₂)_p, wherein R₈ is a C₁-C₂₀ hydrocarbon group, and p is an integer ranging from 1 to 12;

- R₅ is chosen from hydrogen and a saturated or unsaturated, linear or branched, C₁-C₃₃ hydrocarbon group optionally substituted with at least one hydroxyl group, wherein said hydroxyl group is optionally etherified by a group chosen from a (glycosyl)_n group, a (galactosyl)_m group, a sulfogalactosyl group, a phosphorylethylamine group, and a phosphorylethylammonium group, wherein m and n have the same meanings as above; and

with the proviso that when R₃ and R₅ are each hydrogen or when R₃ is hydrogen and R₅ is a methyl group, then R₄ is not chosen from hydrogen, a methyl group, and an ethyl group.

67. The method according to claim 64, wherein said at least one ceramide compound is chosen from:

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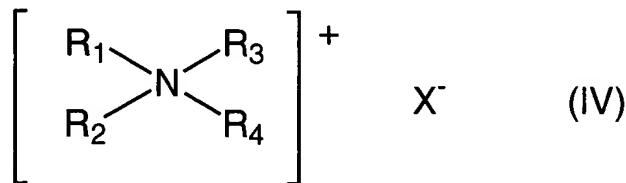
- 2-(N-linoleoylamino)-1,3-octadecanediol,
- 2-(N-oleoylamino)-1,3-octadecanediol,
- 2-(N-palmitoylamino)-1,3-octadecanediol,
- 2-(N-stearoylamino)-1,3-octadecanediol,
- 2-(N-behenoylamino)-1,3-octadecanediol,
- 2-[N-(2-hydroxypalmitoyl)amino]-1,3-octadecanediol,
- 2-(N-stearoylamino)-1,3,4-octadecanetriol, and
- 2-(N-palmitoylamino)-1,3-hexadecanediol.

68. The method according to claim 64, wherein said at least one ceramide compound is chosen from bis(N-hydroxyethyl-N-cetyl)malonamide, N-(2-hydroxyethyl)-N-(3-cetyloxy-2-hydroxypropyl)amide of cetylic acid and N-docosanoyl-N-methyl-D-glucamine.

69. The method according to claim 64, wherein said at least one liquid fatty alcohol is chosen from lauryl alcohol, myristyl alcohol, isomyristyl alcohol, isostearyl alcohol, isocetyl alcohol, isoarachidyl alcohol, 2-octyldodecanol, 2-butyloctanol and oleyl alcohol.

70. The method according to claim 64, wherein said at least one cationic surfactant is chosen from:

A) quaternary ammonium salts of formula (IV):



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wherein X⁻ of formula (IV) is an anion chosen from halide anions, (C₂-C₆)alkyl sulfate anions, phosphate anions, alkyl sulfonate anions, alkylaryl sulfonate anions, and anions derived from an organic acid, and

(i) R₁, R₂, and R₃, of formula (IV), which may be identical or different, are chosen from aromatic groups and from linear and branched aliphatic groups comprising from 1 to 4 carbon atoms, wherein said aliphatic groups optionally comprise at least one heteroatom, and then

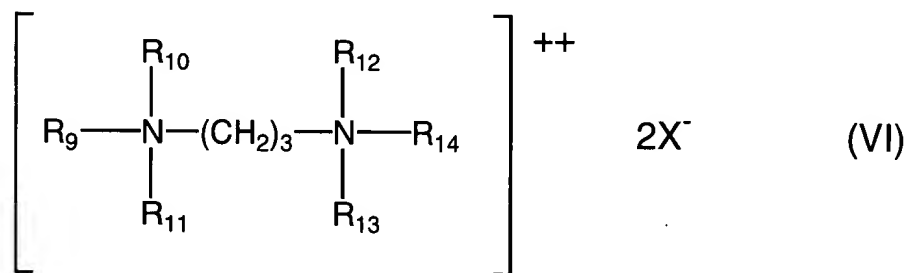
R₄ of formula (IV) is chosen from linear and branched alkyl groups comprising from 20 to 30 carbon atoms; or alternatively

(ii) R₁ and R₂, of formula (IV), which may be identical or different, are chosen from aromatic groups and from linear and branched aliphatic groups comprising from 1 to 4 carbon atoms, wherein said aliphatic groups optionally comprise at least one heteroatom, and then

R₃ and R₄, of formula (IV), which may be identical or different, are chosen from linear and branched alkyl groups comprising from 12 to 30 carbon atoms, wherein said alkyl groups comprise at least one group chosen from ester groups and amide groups;

B) - quaternary ammonium salts of imidazolinium;

C) - quaternary diammonium salts of formula (VI):



wherein

R₉ is chosen from aliphatic groups comprising from about 16 to 30 carbon atoms,

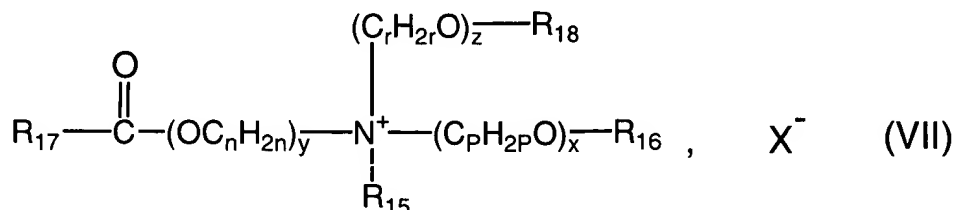
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R_{10} , R_{11} , R_{12} , R_{13} and R_{14} , which may be identical or different, are chosen from hydrogen and alkyl groups comprising from 1 to 4 carbon atoms, and

X^- of formula (VI) is an anion chosen from halide anions, acetate anions, phosphate anions, nitrate anions and methyl sulfate anions; and

D) - quaternary ammonium salts, comprising at least one ester functional group, of formula (VII),:

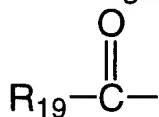


wherein

- R_{15} is chosen from C_1 - C_6 alkyl groups, C_1 - C_6 hydroxyalkyl groups, and dihydroxyalkyl groups;

- R_{16} is chosen from:

- group



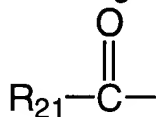
- linear and branched, saturated and unsaturated, C_1 - C_{22} hydrocarbon groups

R_{20} , and

- hydrogen,

- R_{18} is chosen from:

-group



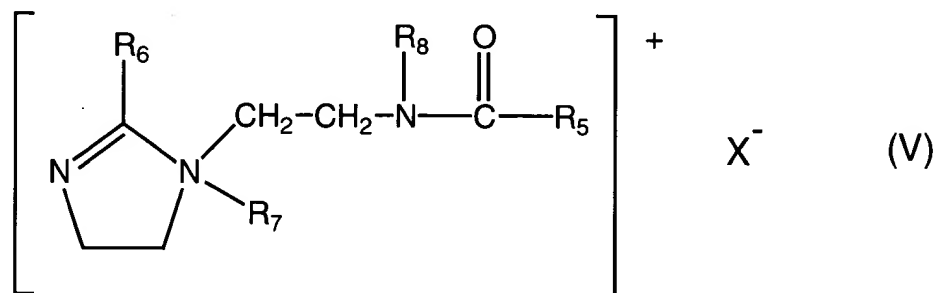
- linear and branched, saturated and unsaturated, C_1 - C_6 hydrocarbon groups R_{22} , and

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- hydrogen,
 - R_{17} , R_{19} and R_{21} , which are identical or different, are each chosen from linear and branched, saturated and unsaturated, C_7 - C_{21} hydrocarbon groups;
 - n , p and r , of formula (VII), which are identical or different, are each integers having values ranging from 2 to 6;
 - y of formula (VII) is an integer having a value ranging from 1 to 10;
 - x and z , of formula (VII), which are identical or different, are each integers having values ranging from 0 to 10;
 - X^- of formula (VII) is an anion chosen from organic anions and inorganic anions, and chosen from simple anions and complex anions;
- with the provisos that the sum $x + y + z$, of formula (VII), has a value ranging from 1 to 15, that when x of formula (VII) has a value of 0, then R_{16} denotes R_{20} , and that when z of formula (VII) has a value of 0, then R_{18} denotes R_{22} .

71. The method according to claim 70, wherein said at least one cationic surfactant is a quaternary ammonium salt of imidazolinium of formula (V):



wherein R_5 of formula (V) is chosen from alkenyl groups comprising from 8 to 30 carbon atoms and alkyl groups comprising from 8 to 30 carbon atoms, R_6 of formula (V) is chosen from hydrogen, C_1 - C_4 alkyl groups, alkenyl groups comprising from 8 to 30 carbon atoms, and alkyl groups comprising from 8 to 30 carbon atoms, R_7 of formula (V) is chosen from C_1 - C_4 alkyl groups, R_8 of formula (V) is chosen from hydrogen and C_1 - C_4

alkyl groups, and X^- of formula (V) is an anion chosen from halide anions, phosphate anions, acetate anions, lactate anions, alkyl sulfate anions, alkyl sulfonate anions and alkylaryl sulfonate anions.

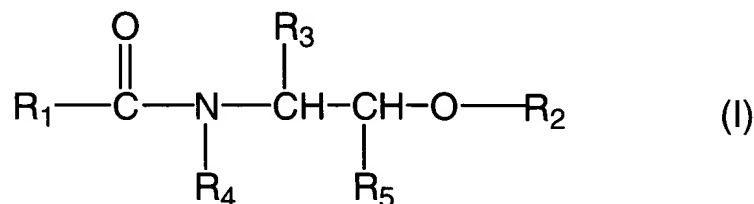
72. The method for treating of keratinous materials according to claim 64, wherein said treating is chosen from: a shampooing; conditioning; dyeing; bleaching; permanent waving; and straightening.

73. The method for treating of keratinous materials according to claim 64, wherein said at least one composition is applied to said keratinous materials before or after treating said keratinous materials.

74. A method of protecting keratinous materials from physical or chemical attacks, comprising applying at least one composition to said keratinous materials, wherein said at least one composition comprises, in a cosmetically acceptable aqueous medium, at least one liquid fatty alcohol, at least one ceramide compound and at least one cationic surfactant.

75. The method according to claim 74, wherein said keratinous materials are chosen from hair.

76. The method according claim 74, wherein said at least one ceramide compound is of formula (I):



wherein:

- R₁ is chosen from:

- a saturated or unsaturated, linear or branched, C₁-C₅₀ hydrocarbon group, wherein said C₁-C₅₀ hydrocarbon group is optionally substituted with at least one hydroxyl group, wherein said hydroxyl group is optionally esterified by an acid R₇COOH, R₇ being chosen from a linear or branched, saturated or unsaturated, C₁-C₃₅ hydrocarbon group, wherein said C₁-C₃₅ hydrocarbon group of R₇ is optionally substituted with at least one hydroxyl group that is optionally esterified by a linear or branched, saturated or unsaturated, C₁-C₃₅ fatty acid, wherein said C₁-C₃₅ fatty acid is optionally substituted with at least one hydroxyl group;

Al - a group R''-(NR-CO)-R', wherein R is chosen from hydrogen and a C₁-C₂₀ hydrocarbon group substituted with at least one hydroxyl group, and wherein R' and R'' are chosen from hydrocarbon groups, wherein the sum of the carbon atoms in R' and R'' ranges from 9 to 30, and wherein R' is a divalent radical; and

- a group R₈-O-CO-(CH₂)_p, wherein R₈ is a C₁-C₂₀ hydrocarbon group, and p is an integer ranging from 1 to 12;

- R₂ is chosen from hydrogen, a saccharide group, a sulfate residue, a phosphate residue, a phosphorylethylamine group and a phosphorylethylammonium group;

- R₃ is chosen from hydrogen and a saturated or unsaturated, linear or branched, C₂-C₃₃ hydrocarbon group, wherein said C₁-C₃₃ hydrocarbon group is optionally substituted with at least one hydroxyl group, wherein said hydroxyl group is

- optionally esterified by an acid chosen from an inorganic acid and an acid R₇COOH, wherein R₇ has the same meaning as above, or

- optionally etherified by a group chosen from a (glycosyl)_n group, a (galactosyl)_m group, a sulfogalactosyl group, a phosphorylethylamine group and a

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phosphorylethylammonium group, wherein n is an integer ranging from 1 to 4 and m is an integer ranging from 1 to 8 ,

and wherein R₃ is optionally substituted with at least one C₁-C₁₄ alkyl group;

- R₄ is chosen from hydrogen, a methyl group, an ethyl group, an optionally hydroxylated, linear or branched, saturated or unsaturated, C₃-C₅₀ hydrocarbon group, a group -CH₂-CHOH-CH₂-O-R₆, wherein R₆ is chosen from a C₁₀-C₂₆ hydrocarbon group and a group R₈-O-CO-(CH₂)_p, wherein R₈ is a C₁-C₂₀ hydrocarbon group, and p is an integer ranging from 1 to 12;

- R₅ is chosen from hydrogen and a saturated or unsaturated, linear or branched, C₁-C₃₃ hydrocarbon group optionally substituted with at least one hydroxyl group, wherein said hydroxyl group is optionally etherified by a group chosen from a (glycosyl)_n group, a (galactosyl)_m group, a sulfogalactosyl group, a phosphorylethylamine group, and a phosphorylethylammonium group, wherein m and n have the same meanings as above; and

with the proviso that when R₃ and R₅ are each hydrogen or when R₃ is hydrogen and R₅ is a methyl group, then R₄ is not chosen from hydrogen, a methyl group, and an ethyl group.

77. The method according to claim 74, wherein said at least one ceramide compound is chosen from:

- 2-(N-linoleoylamino)-1,3-octadecanediol,
- 2-(N-oleoylamino)-1,3-octadecanediol,
- 2-(N-palmitoylamino)-1,3-octadecanediol,
- 2-(N-stearoylamino)-1,3-octadecanediol,
- 2-(N-behenoylamino)-1,3-octadecanediol,
- 2-[N-(2-hydroxypalmitoyl)amino]-1,3-octadecanediol,
- 2-(N-stearoylamino)-1,3,4-octadecanetriol, and

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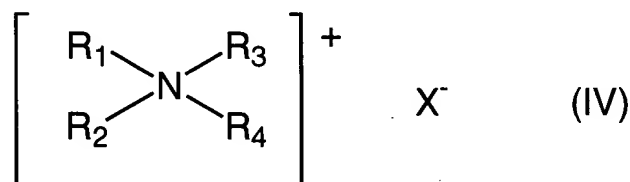
- 2-(N-palmitoylamino)-1,3-hexadecanediol.

78. The method according to claim 74, wherein said at least one ceramide compound is chosen from bis(N-hydroxyethyl-N-cetyl)malonamide, N-(2-hydroxyethyl)-N-(3-cetyloxy-2-hydroxypropyl)amide of cetylic acid and N-docosanoyl-N-methyl-D-glucamine.

79. The method according to claim 74, wherein said at least one liquid fatty alcohol is chosen from lauryl alcohol, myristyl alcohol, isomyristyl alcohol, isostearyl alcohol, isocetyl alcohol, isoarachidyl alcohol, 2-octyldodecanol, 2-butyloctanol and oleyl alcohol.

80. The method according to claim 74, wherein said at least one cationic surfactant is chosen from:

A) quaternary ammonium salts of formula (IV):



wherein X^- of formula (IV) is an anion chosen from halide anions, (C_2-C_6) alkyl sulfate anions, phosphate anions, alkyl sulfonate anions, alkylaryl sulfonate anions, and anions derived from an organic acid, and

(i) R_1 , R_2 , and R_3 , of formula (IV), which may be identical or different, are chosen from aromatic groups and from linear and branched aliphatic groups comprising from 1 to 4 carbon atoms, wherein said aliphatic groups optionally comprise at least one heteroatom, and then

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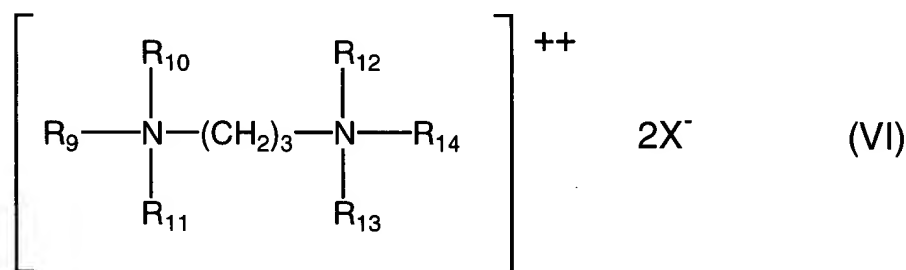
R₄ of formula (IV) is chosen from linear and branched alkyl groups comprising from 20 to 30 carbon atoms; or alternatively

(ii) R₁ and R₂, of formula (IV), which may be identical or different, are chosen from aromatic groups and from linear and branched aliphatic groups comprising from 1 to 4 carbon atoms, wherein said aliphatic groups optionally comprise at least one heteroatom, and then

R₃ and R₄, of formula (IV), which may be identical or different, are chosen from linear and branched alkyl groups comprising from 12 to 30 carbon atoms, wherein said alkyl groups comprise at least one group chosen from ester groups and amide groups;

B) - quaternary ammonium salts of imidazolinium;

C) - quaternary diammonium salts of formula (VI):



wherein

R₉ is chosen from aliphatic groups comprising from about 16 to 30 carbon atoms,

R₁₀, R₁₁, R₁₂, R₁₃ and R₁₄, which may be identical or different, are chosen from hydrogen and alkyl groups comprising from 1 to 4 carbon atoms, and

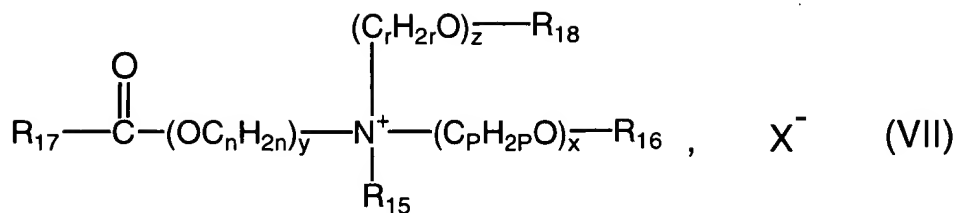
X⁻ of formula (VI) is an anion chosen from halide anions, acetate anions, phosphate anions, nitrate anions and methyl sulfate anions;

and

D) - quaternary ammonium salts, comprising at least one ester functional group, of formula (VII),:

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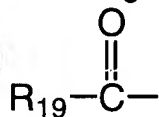


wherein

- R₁₅ is chosen from C₁-C₆ alkyl groups, C₁-C₆ hydroxyalkyl groups, and dihydroxyalkyl groups;

- R₁₆ is chosen from:

- group



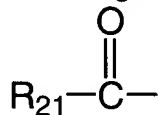
- linear and branched, saturated and unsaturated, C₁-C₂₂ hydrocarbon groups

R₂₀, and

- hydrogen,

- R₁₈ is chosen from:

-group



- linear and branched, saturated and unsaturated, C₁-C₆ hydrocarbon groups R₂₂, and

- hydrogen,

- R₁₇, R₁₉ and R₂₁, which are identical or different, are each chosen from linear and branched, saturated and unsaturated, C₇-C₂₁ hydrocarbon groups;

- n, p and r, of formula (VII), which are identical or different, are each integers having values ranging from 2 to 6;

- y of formula (VII) is an integer having a value ranging from 1 to 10;

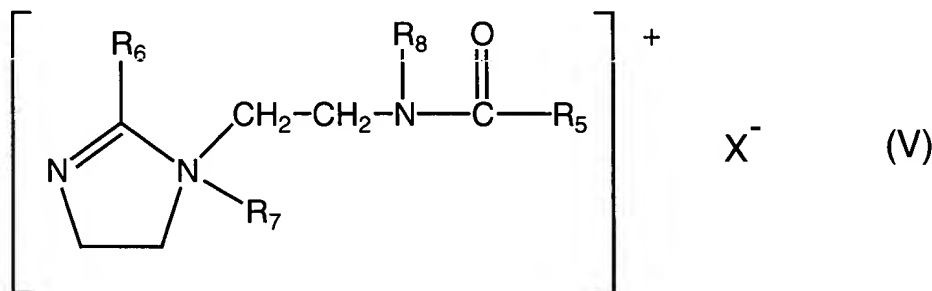
- x and z, of formula (VII), which are identical or different, are each integers having values ranging from 0 to 10;

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- X^- of formula (VII) is an anion chosen from organic anions and inorganic anions, and chosen from simple anions and complex anions;
with the provisos that the sum $x + y + z$, of formula (VII), has a value ranging from 1 to 15, that when x of formula (VII) has a value of 0, then R_{16} denotes R_{20} , and that when z of formula (VII) has a value of 0, then R_{18} denotes R_{22} .

81. The method according to claim 80, wherein said at least one cationic surfactant is a quaternary ammonium salt of imidazolinium of formula (V):



wherein R_5 of formula (V) is chosen from alkenyl groups comprising from 8 to 30 carbon atoms and alkyl groups comprising from 8 to 30 carbon atoms, R_6 of formula (V) is chosen from hydrogen, C_1 - C_4 alkyl groups, alkenyl groups comprising from 8 to 30 carbon atoms, and alkyl groups comprising from 8 to 30 carbon atoms, R_7 of formula (V) is chosen from C_1 - C_4 alkyl groups, R_8 of formula (V) is chosen from hydrogen and C_1 - C_4 alkyl groups, and X^- of formula (V) is an anion chosen from halide anions, phosphate anions, acetate anions, lactate anions, alkyl sulfate anions, alkyl sulfonate anions and alkylaryl sulfonate anions. --

Remarks

Claims 19-81 are now pending. Originally filed claims 1-18 have been cancelled without prejudice or disclaimer and replaced by new claims 19-81. New claims 19-81 have been added to more particularly point out and distinctly claim that which Applicants

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consider to be their invention. New claims 19-81 are not intended to be, nor believed to be, any more narrow than original claims 1-18. Claims 19-81 are fully supported by the original application disclosure and claims of the international application as originally filed. Accordingly, no new matter has been added.

If the Examiner believes a telephone conference would be helpful in advancing the prosecution of this application, the Examiner is respectfully urged to contract Applicants' undersigned representative at (202) 408-4128.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

By: 

Charles D. Niebylski
Reg. No. 46,116

Dated: November 7, 2001

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